Pennsylvania Department of Environmental Protection

**2 East Main Street**
**Norristown, PA 19401**

October 1, 2004

**Southeast Regional Office**

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Mr. Edward Boyle
Remedial Project Manager
Naval Facilities Engineering Command
EFA Northeast
Code EV21/EJB
Mail Stop No. 82
10 Industrial Highway
Lester, PA 19113-2090

Re: ECP - Land Recycling Program
NO FURTHER ACTION for Soil and Groundwater
IR Site 10 - Navy Fuel Farm NASJRB
EFACTS No. 594686
Easton Road
Horsham Township
Montgomery County

Dear Mr. Boyle:

The Pennsylvania Department of Environmental Protection (Department) has completed review of the following documents submitted to the Department on your behalf by EA Engineering, Science, and Technology:

- "Final Report, Request for No Further Action, Installation Restoration (IR) Site 10 Ground-Water, Naval Air Station Joint Reserve Base, Horsham Township, Pennsylvania," received by the Department on September 29, 2004;
- "Addendum Final IR Site 10 Soil Letter Report to Support No Further Investigation at this Time, NASJRB, Willow Grove, PA," received by the Department on September 27, 2004;
- "IR Site 10 Soil Letter Report to Support No Further Investigation at this Time - Final," received by the Department on December 22, 2003; and
- The regional files associated with the named above facility.

The Department believes that the information presented in the named above documents have presented the sufficient data to support NO FURTHER ACTION at this time for groundwater and soil at IR Site 10 - Navy Fuel Farm NASJRB for the releases of the regulated substances:

- Jet fuel - associated with the partially buried 210,000-gallon Tank No. 115; and
- Waste oil - associated with 500-gallon leaking underground storage tank.

This decision is based on current and historical groundwater and soil data supporting the premise that any areas of possible impact above the relevant Act 2 soil standards remaining at IR Site 10 are limited and not representative of unacceptable exposure based on current and presumed future land uses. Collecting present-day soil attainment samples at all known areas of concern was not feasible in consideration of the current land use with limited access according to the Department of the Navy.

IR Site 10 is approximately 2 acres and includes several aboveground storage tanks (ASTs), associated aboveground piping, paved parking lots, paved roads, industrial buildings, and grass areas over the concrete slabs and soil. Several buried utilities, including water, electric, sewer, telephone, and product piping exist on and adjacent to the Navy Fuel Farm grounds.

In 1986, a spill occurred when former Tank No. 115 was overfilled and fuel was released from the vent pipe into the ground. During the same year, a utility trench was excavated along the western boundary of the site where light non-aqueous phase liquid (LNAPL) was observed floating on the water within the trench. The area where LNAPL was discovered is immediately adjacent to a former dry well. The dry well accepted water that was periodically siphoned from the bottom of the fuel tanks.

In March 1989, jet fuel was detected emanating from two patches of dead grass on the west side of partially buried Tank No. 115. The tank was subsequently emptied.

In 1991, two 210,000-gallon jet fuel tanks (Nos. 115 and 116), along with the underground 500-gallon waste oil and diesel fuel storage tanks, were removed. In addition, 6,500 cubic yards of possibly contaminated soil were removed and properly disposed during the tanks removal as part of the initial remediation. Subsequent to the completion of the removal activities, a new AST system set in a concrete berm was installed to the east of the former tank field location.

In 1998, a vacuum-enhanced LNAPL recovery system was installed to include recovery from three existing monitoring wells (NFFW-2R, NFFW-14, and NFFW-16) and had been taken offline in 2001.

From December 2001 to July 2000, LNAPL was not detected during monitoring events. In August 2002, the oil/water interface probe indicated the presence of LNAPL in RW-2R and RW-16. During 2003 and 2004 sampling events, LNAPL had not been detected within the existing monitoring network.

The groundwater samplings had been conducted before the recovery system installation in 1993, 1997, and after completion of vacuum enhancement remediation in May-June 2003 and February 2004. The samples were analyzed for volatile organic compounds, semi-volatile organic compounds, target analyte list metals, and selected natural attenuation parameters (methane, ferrous iron, hydrogen sulfide, and sulfate). Analytical results of groundwater sampling demonstrated significant reduction in dissolved petroleum hydrocarbon concentration as a result of a natural attenuation in addition to the vacuum enhanced remediation system that was in operation.

A fate and transport analysis demonstrated that detected elevated concentration of benzene (10µg/l), bis(2-ethylhexyl)phthalate (190µg/l), and benzo(a)pyrene (0.27µg/l), during the last two monitoring events (2003 and 2004), will attenuate below used aquifer MSCs in non-residential setting before reaching the property boundary.

The Department recognizes that the elevated concentrations of iron, magnesium, and aluminum in groundwater do exceed the Secondary Maximum Contaminant Levels; however, these substances do not appear directly related to any past releases at Site 10. The laboratory analytical results indicated that concentration of lead exceeded MSC of 5.0µg/l in Monitoring Wells 10MW-2R (8.3µg/l) and 10MW-14 (5.4µg/l) during the 2003 monitoring event. During the 2004 monitoring event, lead was detected in 10MW-2R (5.1µg/l) and 10MW-7 (5.8µg/l); however, it had not been detected in the downgradient monitoring wells on the site during both monitoring events.

This letter does not document that all IR Site 10 soil is in compliance with the current calculated MSCs for all substances known or expected to have been released at Site 10 nor does this letter documents that all IR Site 10 soil occupying known or suspected areas of concern (AOC) is in compliance with the current MSCs.

The Department suggests it may be appropriate to seek a site closure under the technical requirements of Act 2 for known releases at IR Site 10 for soil and groundwater if base closure or significant changes in land use occur at the site in the future.

Thank you for your cooperation in working with the Department in the remediation of this site. Your efforts are helping to return land to productive use and prevent the needless loss of greenspace across the Commonwealth.

If you have any questions or need further information regarding this matter, please contact the Environmental Cleanup Program.

Sincerely,

Yuriy I. Neboga
Project Officer
Environmental Cleanup

for James R. Burke, P.G.
Licensed Professional Geologist
Environmental Cleanup

cc: Mr. Dale – Naval Facility Engineering Command
Mr. Edmond – NASJRB
Ms. Sheedy - Engineering, Science, and Technology
Ms. Flipse
Ms. Warren
Regional File
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